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THE FARM INDEX

U.S. Department of Agriculture / September 1973

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PROCUREMENT SECTION
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**BEEF
FOR
BILLIONS**



Highlights of the look-ahead for the agricultural sector for the rest of 1973—

- ✓ Record grain and soybean production.
- ✓ Possible repeat of last year's record in export sales.
- ✓ Continued heavy consumer demand for livestock products.

These factors add up to the best year yet for net realized income on the Nation's farms.

In August, ERS economists were projecting the net income figure would be around \$24 billion—a new record by far.

Costs of inputs are maintaining their upward spiral. At the same time, however, gross farm income is being lifted to an alltime high by improved prices for livestock and crops, combined with a bulge in crop marketings.

Farm production expenses will head uphill for the remainder of 1973, and may total \$60 billion—\$11 billion more than in 1972. But gross farm income by August indications will run at an even faster clip than expenses. The gross is seen advancing by \$15 billion from 1972 to a total close to \$85 billion in 1973. Farm prices for both livestock and crops will be much higher in second half 1973 than in the first half.

Retail food prices are now expected to jump sharply in the next several months despite prospects for larger crop production. Reduced stocks of major food and feed products, along with sustained strength in domestic and export markets, seem likely to keep the pressure on food prices.

For all of 1973, prices of food bought for home use may average 18-22 percent above 1972, according to the August issue of ERS's *National Food Situation*. With food eaten away from home increasing at a slower pace, the all-food price index is projected about 17 percent above a year ago, assuming present farm production forecasts materialize.

Per capita food consumption may inch down this year, marking the first decline since 1965. Total falloff is figured at 1 percent, with a 1-percent

gain in crop foods to be wiped out by a 2-percent drop in consumption of livestock-related foods. Meat and egg use will skid the most, followed by poultry. Declines are also slated for fresh vegetables and potatoes, coffee, and cocoa. Fish and dairy consumption will stay about the same.

Consumer resistance to steeper prices, as well as limited supplies, was reflected in a drastic decline in use of most livestock-related foods in the second quarter. Total red meat consumption tumbled 10 percent from a year ago, falling to its lowest level in 7 years. Egg use fell 5 percent. Poultry meat was down only slightly.

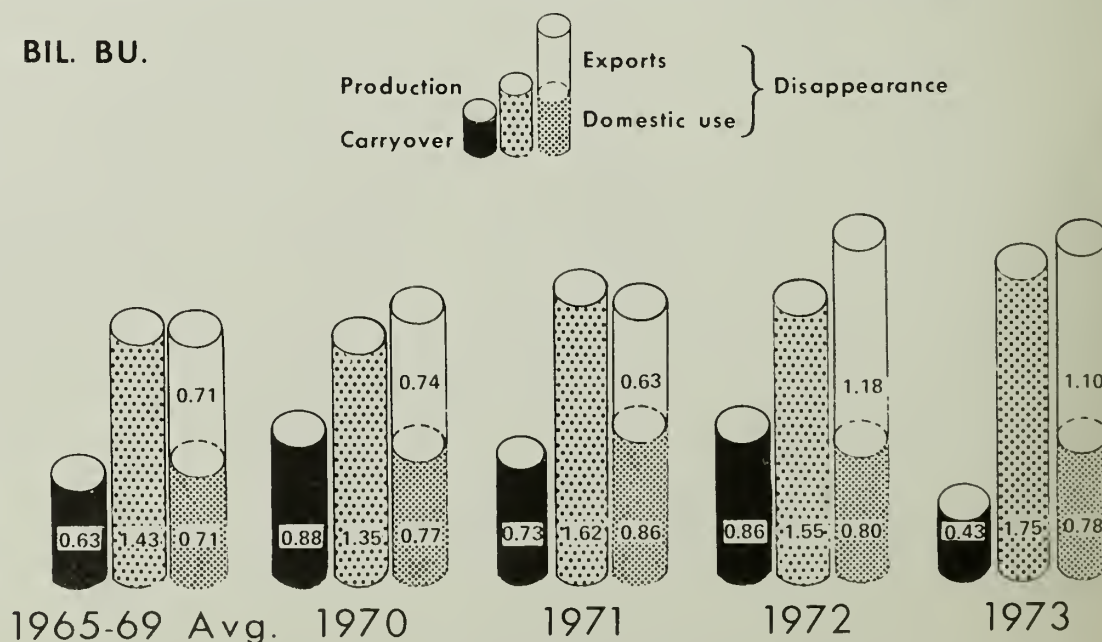
U.S. wheat supply in 1973/74 could be the smallest in 5 years. Based on August prospects, total supplies for the current season are estimated at nearly 2.2 billion bushels—a tenth below the 1972/73 figure.

The August crop forecast called for a record wheat harvest of 1.7 billion bushels, up 11 percent from last year and 6 percent from the previous high set in 1971. But a reduced carryover into the 1973/74 season more than offsets the production increase. Total carryover on July 1, at an estimated 428 million bushels, dropped 50 percent to the lowest level since 1967. Responsible were the record 1972/73 exports of nearly 1.2 billion bushels.

The tight situation in wheat supply

WHEAT SUPPLY AND DISAPPEARANCE

BIL. BU.



YEAR BEGINNING JULY 1

1972 PRELIMINARY. 1973 PROJECTED.

is underscored by the drawdown in "marketable free" stocks on July 1, which fell to a 9-year low. Stocks owned by the Commodity Credit Corporation (CCC) were virtually nil.

In addition, farmers held 82 million bushels of loan wheat. Although all of these loans had expired, an extension was granted in areas where transportation tieups and rail car shortages prevented farmers from shipping.

Supply-demand situation will stay tight for the remainder of the 1973/74 season, in view of the strong import demand for wheat around the world coupled with uncertainties over availabilities for export.

Total U.S. wheat use this season—domestic and export—is likely to outstrip production. This could result in another slippage in carryover at the end of 1973/74 . . . possibly to below 300 million bushels.

On the specifics—

Domestic use, by the August indications, is projected 2 percent below last season's 796 million bushels. Less wheat feeding would cause the decline, although much depends on the outcome of the feed grain harvest, especially sorghum. Food use is expected to rise moderately from recent levels of 525 million bushels. This assumes consumers will continue to substitute wheat foods for higher priced products.

U.S. wheat exports are seen holding

near last season's record 1.2 billion bushels. Demand in the USSR should be off sharply. Partly offsetting this decline will be bigger shipments to India, the People's Republic of China, North Africa, and West Asia.

Prices for shorn wool have staged a dramatic recovery. U.S. farm prices in 1973 are likely to average more than twice the 35¢ per pound (grease basis) received last year. Though prices have retreated from the March peak of nearly \$1 per pound, most of the 1973 clip has already been sold at higher prices.

Reduced supplies this year explain the price rally, reflecting declines in both raw apparel stocks and production. Production of U.S. shorn wool is expected to drop 9 percent to 144 million pounds. This marks the 13th year of consecutive decline. Number of sheep shorn in 1973 is estimated at 17.4 million—off 7 percent.

U.S. mill use of raw apparel wool won't reach the 142 million pounds (scoured basis) of 1972. However, foreign demand for U.S. wool tops continues active as world supplies are tight.

U.S. consumption of carpet wool will probably total sharply below 1972's 76 million pounds. High prices with limited world supplies are restricting use. Manmade fibers have been making deeper inroads into the expanding carpet market, despite shorter supplies of manmades and firm prices.

U.S. exports of raw wool in 1973 are projected substantially less than the record 11 million pounds (clean basis) shipped in 1972. Foreign prices remain high relative to U.S. prices, but this is largely offset by our nearly depleted stocks and lower production of raw apparel wool.

Difference between U.S. apparel wool supplies and expected mill use is greater than last year, so import requirements are moving up. Imports will probably top the 25 million pounds (clean basis) brought in last year. However, duty-free imports of raw carpet wools are in for a marked decrease considering the bearish outlook for U.S. mill use of carpet wool.

FARM

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Martin Schubkegel
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Diana Morse
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Diane Decker
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Staff Editors

David Brewster
Carol Curtis
Contributing Editors

Contents of this magazine may be reprinted without permission. They are based on research of the Economic Research Service and on studies done in cooperation with State agricultural experiment stations. Use of funds for printing this publication approved by Director of the Office of Management and Budget, May 24, 1972. Subscription price: \$3.50 yearly (\$4.50 foreign). Single copies 45 cents. Order from Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402

The Farm Index is published monthly by the Economic Research Service, U.S. Department of Agriculture. September 1973 Vol. XII. No. 9.

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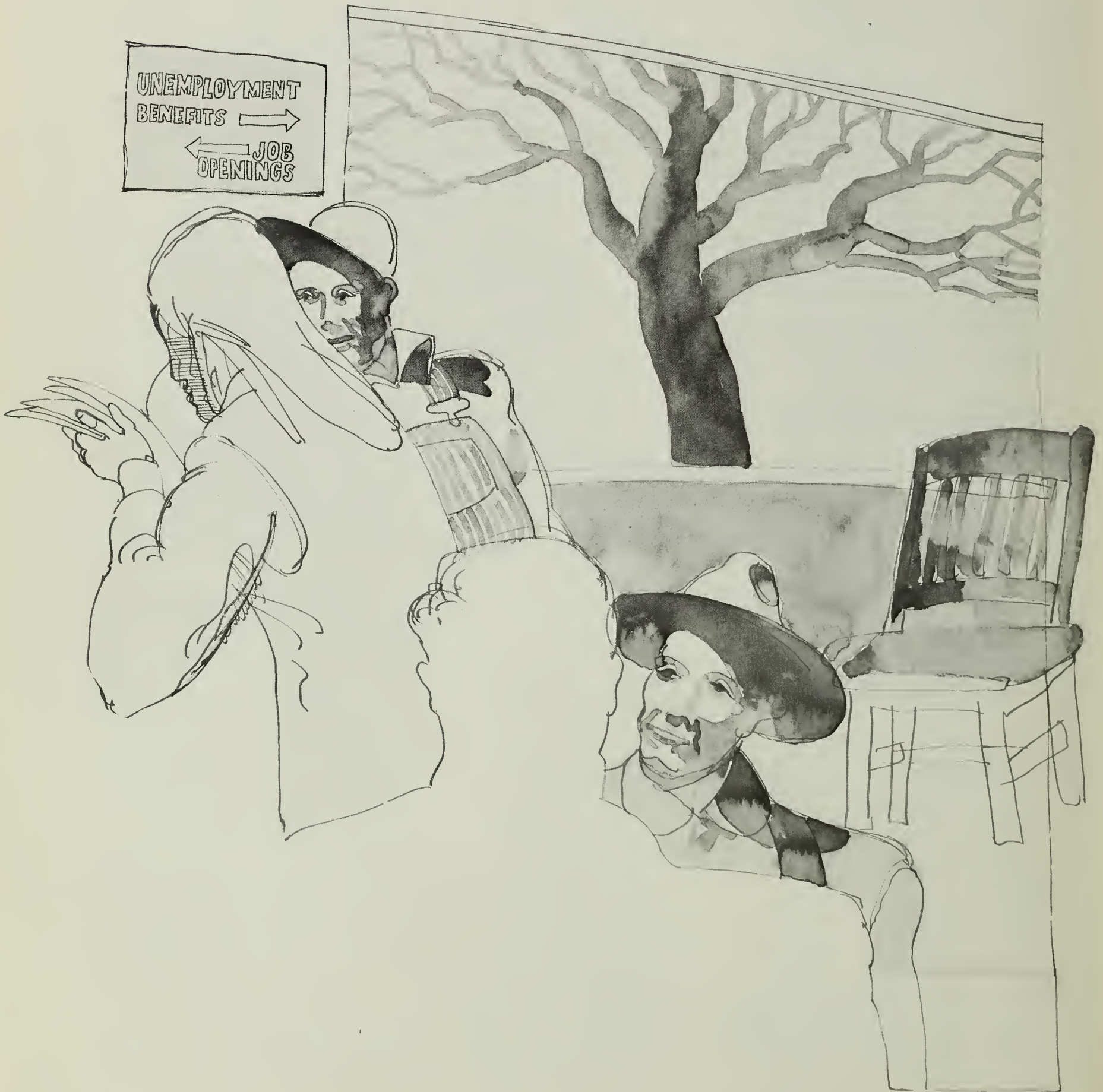
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U.I. FOR FARMWORKERS



Costs to employers would vary widely if unemployment insurance were extended to agriculture, a 14-State survey shows.

Except for Hawaii, no State in the Union provides mandatory unemployment insurance (U.I.) for employees in agriculture. Farmworkers have been excluded from U.I. mainly because much of agriculture's labor demands are very seasonal.

Supposing U.I. were in fact available to farmworkers. What would it cost employers on a national scale?

No one knows for sure. Reason is the costs would vary from year to year with changes in economic conditions.

However, a rough indication can be obtained from a 1970 survey, results of which have been analyzed in a report to the U.S. Labor Department. The survey was based on interviews with 13,000 persons doing hired farm work in a 14-State area.

Bill to employers. A key finding was that if all farmworkers in the 14 States had been given full U.I. coverage in the survey period, the cost to employers would have averaged 3 percent of taxable agricultural wages. (Benefit payments to workers usually become costs to their employers. The only exception among the 14 States is New Jersey, where workers also bear some of the cost.)

Looking at individual States, however, the cost rate varied widely from 0.8 percent to 6.7 percent.* This is explained in large part by differences in the criteria and formulas for computing benefits and by differences in the pattern of labor demand on the predominant types of farms.

For instance, dairy farms have relatively few hired workers, and most of them are employed throughout the year. Thus, States where dairy farming predominates, such as Vermont, tend to have lower cost rates.

* States in the survey, and their benefit cost rates: Del. (5.1); Md. (1.5); N.J. (5.8); N.Y. (1.6); Pa. (1.6); W. Va. (1.4); Conn. (6.7); Maine (2.1); Mass. (3.0); N.H. (2.4); R.I. (5.1); Vt. (0.8); Fla. (3.0); and Texas (NA).

In contrast, vegetables or fruit and nut farms—e.g., in New Jersey—usually have a small number of year-round workers, but they also employ large numbers of workers during the short periods of peak labor demand, such as at harvest time. These workers typically have more periods of unemployment than do regular workers, so cost rates for employers are apt to be steeper.

Nonqualifiers. Not all seasonal workers, though, run up U.I. costs for their employers. In many places, especially densely populated areas, farm employers can draw on a labor supply that adds very little to the cost rate. These workers are students, housewives, and others who enter the labor force only briefly to harvest the crop and earn a little pin money. Many of them do not work long enough to meet the criteria of being genuinely attached to the labor force and therefore do not qualify for U.I. payments.

Another group that adds little to the benefit costs are workers employed in nonfarm jobs all or most

of the year. Some spend their vacation or weekends doing farm work, while others even hold down regular jobs and work on farms after hours. Many of these people have little if any unemployment.

Besides the type of farming prevailing in a particular State, the State's criteria for U.I. eligibility have quite an impact on the cost. Suppose a worker earned \$3,000 in 20 weeks of work at an average of \$150 per week, and also had 30 weeks of unemployment. In 1971, he would have received the following benefit payments in each of the 14 States, assuming he worked all 13 weeks in the quarter in which he had the highest earnings:

Delaware	\$1,410
Maryland	\$2,028
New Jersey	\$1,080
New York	\$1,950
Pennsylvania	\$1,500
West Virginia	\$ 780
Connecticut	\$1,950–\$2,250
Maine	\$1,000
Massachusetts	\$1,080–\$1,628
New Hampshire	\$1,118
Rhode Island	\$ 900–\$1,140
Vermont	\$1,924
Florida	\$ 540
Ohio	\$ 940–\$1,320

In the four States listing two amounts, the smaller is the maximum without dependents, the larger with dependents.

Cost to U.I. system. Altogether, the 12,000 workers qualifying for payments in these 14 States could have received an estimated \$4.3 million in actual benefits in 1969–70 based on their *nonfarm work*. Adding U.I. coverage for their *agricultural work* would have raised the benefits to \$20.2 million, or an increase of \$15.9 million. In effect, this increase would have been the added cost to the U.I. system of extending coverage to agriculture.

[Based on manuscript by Ward Bauder, Rural Development Service, entitled *Economic and Social Considerations in Extending Unemployment Insurance to Agricultural Workers*.]

U.I. Backgrounder

Early attempts to provide income protection in times of layoffs were made by workers' cooperatives. Workers voluntarily contributed part of their earnings to a fund from which they could draw when unemployed. But because these programs were voluntary, their success was limited.

Then in the early 1900's, compulsory plans began to appear, including the necessary arrangements to share the cost among employers, employees, and the government.

By 1933, 186 separate pieces of unemployment insurance legislation had been introduced in 27 States, and 6 Federal bills had been submitted. But only one State, Wisconsin, had actually enacted legislation. The Wisconsin bill introduced the idea of "experience rating" in allocating costs to employers which set the pattern for the first national unemployment legislation—the 1935 Social Security Act.

AMERICAN FARMERS PILE UP THE RECORDS

U.S. agriculture stacked up more records last year. Farmers not only turned out the greatest volume of products in history, but they also established alltime highs for crop production per acre, farm productivity, labor productivity, and acres harvested for export.

In its annual report *Changes in Farm Production and Efficiency*, ERS said farm output in 1972 rose 1 percent from a year earlier and 11 percent from 1967. Both crop and livestock production posted gains of 1 percent, reaching new peaks.

Increase uneven. However, the increase in crop output was not evenly distributed among crops. Feed grain production dropped 4 percent; per acre yields advanced 7 percent but acres harvested declined 11 percent. Food grain production was off by nearly 5 percent and fruits and nuts by 10 percent due to unfavorable growing conditions for most crops. Hay and forage production just missed equaling the 1971 record.

Oil crops continued the uptrend of the past 2 decades. Cotton made the biggest leap among all crops, 27 percent, reflecting stepped-up acreage harvested and better yields. All

other crop groups exceeded the 1971 output.

Regionally, farm production records were set in the Northern and Southern Plains, Appalachia, Delta States, and the Mountain and Pacific regions. The Lake States, Corn Belt, and Southeast regions narrowly missed the 1971 highs. In contrast, output in the Northeast plunged 10 percent as a result of exceptionally poor growing conditions.

Best yields. Crop production per acre, up 2 percent, surpassed the previous record of 1971. Alltime highs were established for corn, grain sorghum, peanuts, all hay, sugarbeets, and many other crops. Yields of wheat, barley, and rice were the second highest on record, and cotton reached a 5-year high.

All told, the volume of farm inputs used to produce the record 1972 production showed no change from the previous year. Thus, the farm productivity index—output per unit of input—notched up by 1 percent despite difficult harvesting conditions.

Productive Plainsmen. Productivity gained 12 percent in the Southern Plains, 4 percent in the Delta States, and in most other regions by 2 per-

cent or less. Productivity declined in three regions—the Northeast by 10 percent, the Southeast by 3 percent, and the Corn Belt by 1 percent. Hurricane Agnes was responsible for most of the drop in the Northeast and Southeast.

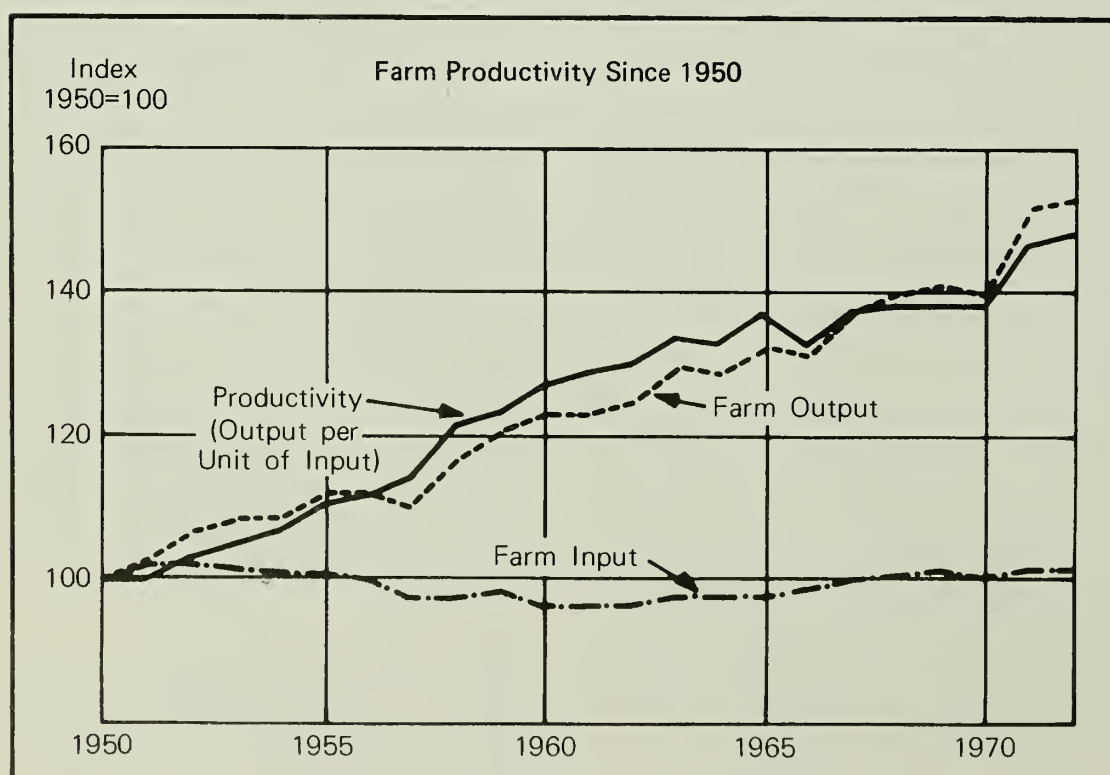
Though the volume of inputs did not change last year, there were significant shifts in the input mix. Farmers continued to purchase increasing amounts of inputs from the nonfarm economy. Purchased inputs rose 2 percent above the 1971 level, whereas nonpurchased inputs fell 1 percent in continuation of a steady 21-year decline.

The input group showing the most change was the miscellaneous category, which climbed 7 percent. Pesticides and cotton ginning accounted for the bulk of this increase.

Farmers used fewer hours of labor in 1972 than ever before. About 6.2 billion hours were needed, down from 6.4 billion in 1971. Planting, cultivating, and harvesting crops required 3.2 billion hours, and 2.1 billion were spent caring for livestock. The residual 0.9 billion went for overhead jobs and miscellaneous tasks.

Labor used in all group production declined in each group except sugar crops, cotton, tobacco, and oil crops. These four required more labor because of increased acreage and production. Hours of labor continued to fall for all classes of livestock, with decreases ranging from 7 percent for poultry to 5 percent for meat animals.

Most per hour. With the labor input at a record low and farm production at a record high, output per hour scaled to new heights. Labor productivity advanced 6 percent from 1971—6 percent for livestock and 3 percent for crops. Poultry scored the largest gain in the livestock group, 11 percent, followed by milk cows at 9 percent and meat animals at 6 percent. Among crops, cotton led with a 13-percent increase. Food grains, on the other hand, registered



a 4-percent decrease because of smaller production. Fruits and nuts were also down, by 1 percent.

The volume of farm products exported last year required the equivalent of 85 million acres, topping the 1963 record by 8 million. Acreage of wheat for export went from 19 million acres in 1971 to 35 million in 1972; corn, from 8 to 11 million; soybeans, from 20 to 22 million; and cotton, from 4 to 5 million. Dairy products dipped from less than 3 million acres to only 1 million. Other livestock products remained near the 1971 level.

Cropland used for crops totaled 336 million acres in 1972, or 4 million less than in 1971. The largest acreage changes were in the Corn Belt, down 3 million acres, and in the Northern Plains, down 1 million. [Based on *Changes in Farm Production and Efficiency, A Summary Report*, Stat. Bull. No. 233, by the National Economic Analysis Division.]

Question:

If U.S. agriculture set so many records last year, why the spurt in food costs?

ERS economists say it's because the demand for agricultural products has been rocketing even faster than the supply. Demand, in turn, has been fueled by increased purchasing power brought about by expansion of the general economy.

The demand surge is also attributed to increases in social security payments . . . income tax refunds from over-withholdings in '72 . . . stepped-up use of consumer credit . . . and consumers' expectations of more price hikes in the future.

The export market has played a key role too. Our agricultural exports shot up a fifth last year in response to tight food supplies in many countries and climbing incomes of foreign buyers.

Another stimulus to exports has been the devaluation of the dollar, which makes U.S. goods cheaper in terms of local currencies.

[Based on special material from Terry Barr, National Economic Analysis Division.]

Farm Mortgage Debt Rises \$3.2 Billion in '72

Farm mortgage debt, as of the first of the year, totaled \$34.5 billion, up more than 10 percent from a year earlier.

The 1972 increase was \$3.2 billion, the largest yearly increase on record and nearly twice that of 1971. The percentage increase, at 10.2 percent, was the largest since 1965.

The yearly increase in the farm debt has risen sharply since 1970. From the middle 1960's to 1970, the debt change in actual dollars as well as percentage change declined due to the shortage of loan funds and the higher interest rates.

During 1972, the farm mortgage debt held by the Federal land banks increased more than that held by any of the other lender groups—14.9 percent compared with 13.6 percent for banks, 2.2 percent for life insurance companies, and 10.1 percent for individuals and other lenders.

The direct loans held by the Farmers Home Administration (FHA) decreased nearly 13 percent as FHA continued the program of transferring from direct lending to an insured loan program.

During the first half of 1973, the new farm mortgage money loaned by Federal land banks, at \$1.4 billion,

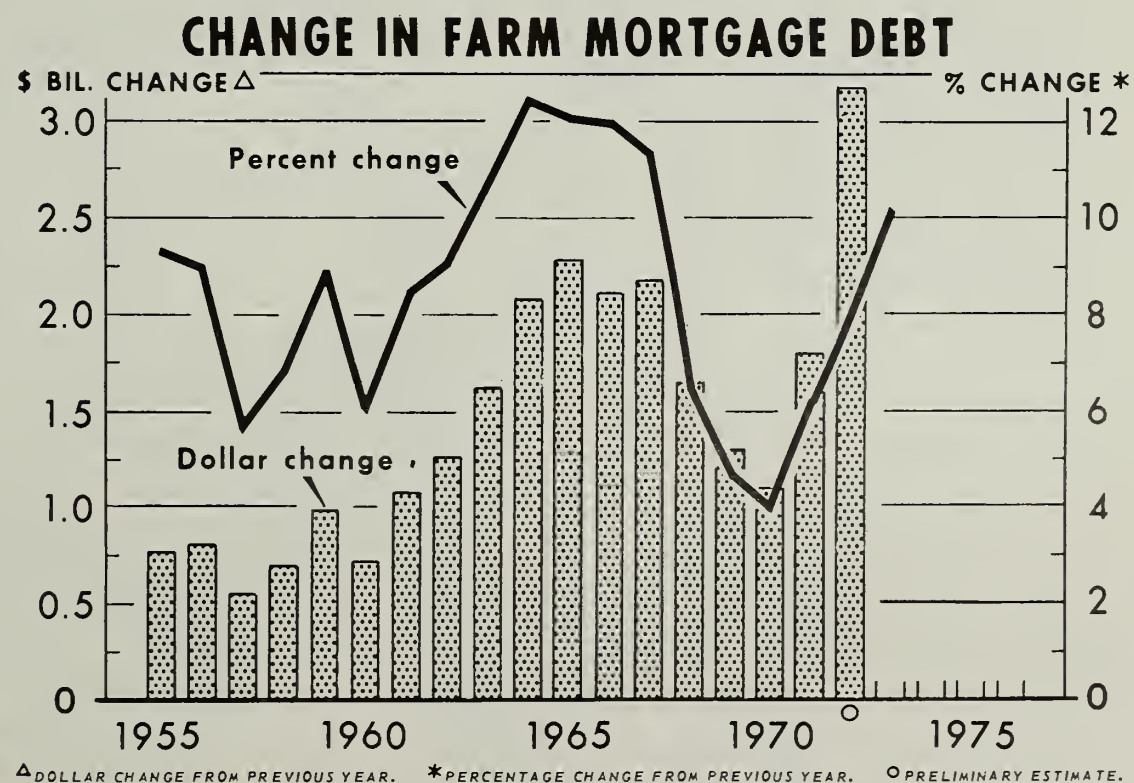
was 44 percent greater than the previous six months and 69 percent greater than a year earlier. Should this rate of increase be sustained, new money loaned for the last half of 1973 will surpass \$2 billion. Provisions in the Farm Credit Act of 1971 which increases the proportion of a farm's value that land banks can finance is but one factor contributing to the substantial increase in Federal land bank lending.

Another major factor, which also influenced the volume of new loans by other lenders, is the substantial increase in land values. For the year ending this past March 1, land values were up 13 percent from March 1, 1972. This increase in land values was due to several factors, including the availability of credit, high level of farm income, and interest rates below the peak 1969-70 level.

Based on reported trends in farm mortgage lending during the first half of 1973, ERS estimates the total farm mortgage debt increase during 1973 will probably equal or exceed the 1972 increase of 10.2 percent.

The ratio of the 1973 farm mortgage debt to the value of real estate decreased slightly, to 13.3 percent from 13.6 percent a year earlier.

[Based on *Farm Mortgage Debt*, FMD-12, August 1973, by Forest G. Warren and Nan P. Mitchem, National Economic Analysis Division.]





PICK YOUR OWN: THE TIME IS RIPE

Picking your own fruits and vegetables can be an amusing way to stock up the family refrigerator. For the small producer, it is also a labor-saving means of harvesting fruits and vegetables.

Even if you don't live on a farm—or own a garden—you can harvest your own Halloween pumpkin this fall. What's more, you can have a picnic that includes apples, tomatoes, radishes, cantaloupes, and even zucchini squash, and pick them all after you arrive in the country.

The idea is simple. You go to a pick-your-own farm when a particular crop is ripe, harvest what you want, and pay the farmer the wholesale price.

Save on food. From the consumer's standpoint, pick-your-own pays for a very clear reason: It's cheaper than store-bought produce. In the Washington, D.C., area, for example, fruits and vegetables picked this way run about two-thirds of the supermarket price.

But at least as important are the recreational and educational aspects. Picking your own fruits and vegetables is fun. It gives urbanites a chance to get out in the country and back to nature, and, not incidentally, teaches their children that fruits and vegetables don't grow in packages.

Well seasoned. Maturity time for pick-your-own crops naturally varies regionally. But from May through November—the high season for rural recreation—there is a steady stream of fruits and vegetables ripe for

picking in many parts of the country. To take one example, in the State of Maryland the season for fruit starts with strawberries in mid-May. It runs through peaches, blueberries, cherries, raspberries, and apples, which come off the trees as late as November.

Vegetables go from asparagus in May through peas, beets, summer squash, green beans, tomatoes, cucumbers, sweet corn, cantaloupes, and lima beans, all the way to Halloween pumpkins.

Maryland was one of the first States to issue a booklet this year through its Extension Service listing over 100 pick-your-own growers. In other States, newspaper ads are often the easiest conduit to local growers. State Departments of Agriculture may also list area pick-your-own farmers. Virginia has such a list for apple growers.

Good for farmers. For the producer, pick-your-own makes hard business sense. The small farmer in particular can gain much from this type of operation:

✓ Labor is reduced. During the past decade, the hand labor situation for harvesting fruits and vegetables has gone from bad to worse. The pick-your-own system relieves the grower of much of the burden of hiring harvest labor.

✓ Price control is greater. When the grower sells his product through the standard channels, he has little control over the price level. The grower selling pick-your-own can set his own price.

✓ Equipment investment is less. The need to invest in packing equipment and buildings such as packing sheds can be reduced in a pick-your-own operation.

✓ It expands the farmer's market. Once established, a good pick-your-own farm can draw large crowds without much advertising. News of a successful operation travels rapidly by word of mouth, and a new market outlet is quickly established.

Of course, planning and organization are important. Adequate parking and traffic guidance are a prerequisite for large farms. Fields need to be well supervised to control damage, and a well-managed check-out counter is essential. Liability and property damage insurance are advisable.

With these things said, the time-honored testimonial is still one of the best indications of what pick-your-own has done for many small farmers. Here are the comments of one New Jersey peach grower: "I think (my customers) picked more fruit than they ever could use. A lot of people picked peaches we would never think of picking . . . anything on the trees. Then it came to the point where they would come along and pick the peaches off the ground. We could have sold the stones . . . there wasn't a thing that went to waste in that orchard."

Enthusiasm like this is far from rare. Because more than the money, pick-your-own is just plain fun.

[Based on special material from John T. Porter, Extension Service.]

Demand for Rice May Be Tapering Off

Growth in domestic demand for rice may be leveling off, a recent USDA study indicates.

The latest data on commercial distribution of American rice were gleaned from an ERS mail survey of 37 milling firms and 13 repackaging firms conducted in late 1972 and early 1973.

The survey found that during the 1971-72 marketing year, domestic use totaled 20.4 million hundred-weight, down 1 percent from 1969-70. Direct food use (excluding Government) took over half. Slightly less than 50 percent was sold in 5-pound packages or less, and over 18 percent of rice for direct food use (excluding Government) was specialty rice. Over half of this was parboiled, and about a third pre-cooked.

Per capita consumption of rice for food is also slipping. On the average, every civilian ate 7.1 pounds in 1971-72—almost a pound less than in the 1966-69 period.

A big gain was recorded in the use of rice for processed foods, especially for soup and package mixes. This more than offset a drop in rice distributed for direct food use, but it was not enough to offset a sharp decline in rice used for beer manufacturing which declined 11.9 percent from a year earlier.

Long and medium grain rice accounted for 97 percent of rice distribution in the U.S. for 1971-72, up 2 percent from 2 years earlier. Of the two types, long grain rice continued to increase in popularity and accounted for 67 percent of distribution.

While civilians were eating less rice, so was the military. Their 1971-72 purchases fell 72 percent from 2 years earlier. Much of the decrease can be attributed to a decline in feeding overseas.

[Based on a manuscript by J. C. Eiland and Theo F. Moriak, Commodity Economics Division, entitled Market Patterns for U.S. Rice, 1971-72.]

RED MEAT CUTBACK

The year-end tally of red meat use may show the lowest per capita figure since 1967. That's how the situation looked in August when ERS livestock economists issued their latest projections.

In the first half of this year, we ate 7 pounds less per person than the 94.2 pounds consumed in the same period of 1972. Usage was off for all red meats, with pork leading the way.

Red meat consumption in the second half of 1973 will outpace first half levels but not enough to keep the annual total from falling below 1972's 189 pounds per person. If it drops to the 1967 level, this would put the per capita figure at around 180 pounds.

At least 4 pounds of the expected decrease will be in beef, consumption of which totaled 116 pounds per person in 1972. The dropoff reflects reduced marketings of steer and heifer beef compared to a year ago. However, compared to the first half of 1973, beef use in the second half may gain about 3 pounds per person.

Pork will account for a substantial part of the overall slip-

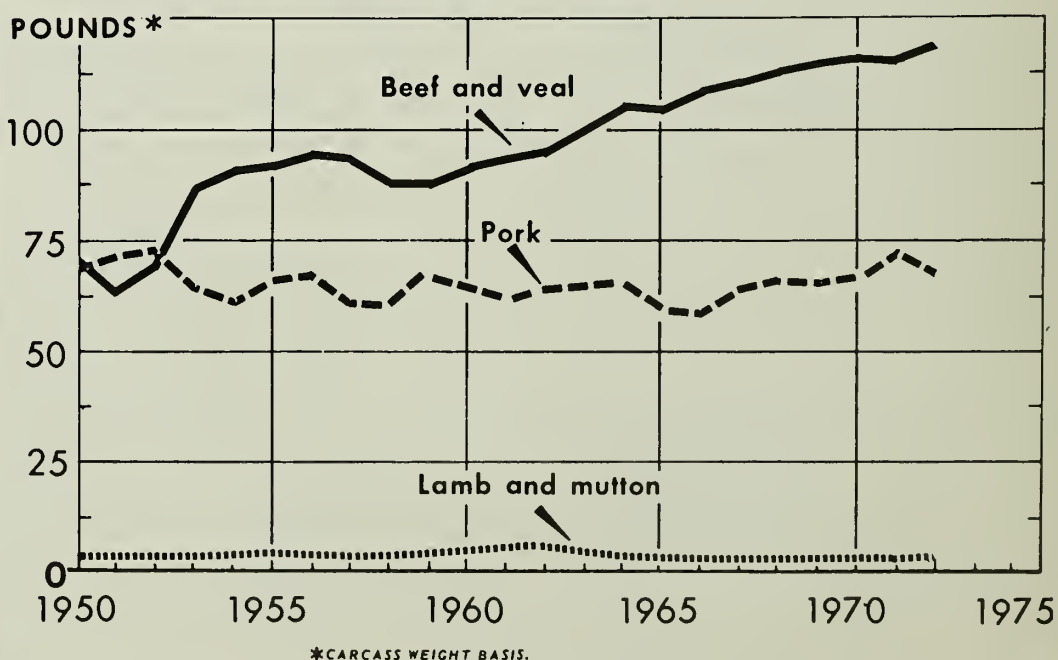
page. The January-June figure for pork was down more than 3 pounds per capita from a year ago. Consumption in July-December will also nudge lower inasmuch as producers did not carry out earlier plans for an increase in the 1973 spring pig crop. Last year's pork consumption averaged 67.4 pounds per person.

Use of lamb and mutton has been trending down for several years due to a sharp cutback in U.S. sheep production. Imports of lamb and mutton have been rising, but not sufficiently to offset the drop in domestic output. Thus, economists foresee a further decrease from 1972's 3.3 pounds per capita.

Like lamb and mutton, veal use has been going downhill for many years, and in 1973 it may fall about a quarter of a pound from last year's 2.2 pounds. Veal production is shrinking because of the increasing proportion of the calf crop that is fattened in feedlots before slaughter and because of a smaller dairy herd to provide veal calves.

[Based on *Livestock and Meat Situation*, LMS-192, by John T. Larsen, Commodity Economics Division.]

MEAT CONSUMPTION PER PERSON



Cotton Blends Rate High In Men's Clothing Survey

How does a man feel about the fabric he's wearing?

He may have a bent toward cotton for its comfortable feel and absorption of moisture, but frequently prefers synthetics because of their wrinkle resistance and need for little or no ironing.

Those are indications from some 2,000 interviews by USDA researchers on the subject of men's attitudes toward cotton and other fibers in men's clothing.

The nationwide study was designed to provide insights into measures which might be taken by natural fiber producers to market their commodity more effectively and to provide guidelines for research in production improvement.

Most of the men said they preferred a cotton blend with a permanent press finish for both their dress shirts and sport shirts. One in 10 preferred 100-percent cotton shirts, whether treated for permanent press or not, for their comfort.

Knit sport shirts were popular among 40 percent of those interviewed, and these men tended to be younger, better educated, and more likely to live in metropolitan areas than those who said they wore woven sport shirts most of the time.

Nearly 3 out of 5 of the men interviewed said they preferred their light-weight slacks to be a blend of cotton and synthetic fibers with a permanent press finish.

Other attributes of cotton cited by 50 percent or more of the men included the fact the fabric is machine washable, has year-round wearability, is a good value for the money, does not cling, and is made in attractive styles and colors.

Of all the clothing men were questioned on, 100-percent cotton was most popular for undershorts. Around four-fifths said 100-percent cotton undershorts had been bought for their use. About the same percentage of respondents said they preferred this item to be all cotton.

Wool's image, while not as favorable as cotton's, included its long-lasting qualities, its absorption of moisture, attractive styles and colors, and good value for the money.

While the wives and mothers of the men interviewed bought many of their husbands' or sons' clothes, the men were more likely to buy their own light-weight sport coats, outer jackets, and slacks, and least likely to buy pajamas.

[Based on manuscript by Evelyn F. Kaitz, National Economic Analysis Division, entitled Men's Attitudes Toward Cotton and Other Fibers in Selected Clothing Items.]

"Open Dating": What Does It Mean?

Consumers aren't the only ones who are unclear about what the phrase "open dating" means.

The preliminary results of an ERS survey show that food handlers and retailers responding to a questionnaire also differed in their interpretation of the phrase.

The finding was part of the third phase of a broad ERS research effort on open dating. Last January and February, ERS mailed out 1,500 questionnaires to food processors and retailers throughout the country.

The object: To give policymakers insight into the extent of voluntary open dating on food packages.

Many of the retailers and processors indicated they list information on products that is not designed for consumer use. Such "code dates" are intended for store personnel, as distinct from "open dates," which can be understood and used by shoppers as a guide to the freshness of perishable food.

According to one ERS researcher, "lack of understanding or agreement about just what constitutes readable dates for consumer use" is still a stumbling block in studies of open dating.

The first two surveys undertaken

by ERS focused on consumer comprehension and use of open dates, and the cost to retail food chains of an open dating program.

[Based on the speech "Consumerism, Packaging, and Labeling," by Eileen F. Taylor, National Economic Analysis Division, presented at the 26th Annual Reciprocal Meat Conference of the American Meat Science Association, Pennsylvania State University, June 20, 1973.]

Fish Stick Eaters May Get Caught Short

If your local food store happens to run low on fish sticks, don't blame the manager.

The facts are these:

In early spring, it became apparent that imported fish blocks—raw material they make sticks from—were getting to be in short supply. So processors were forced to draw heavily on their fish block inventories. The January-June drawdown was the fastest this industry ever witnessed.

With no immediate prospects for a recovery in imports, the future looks bleak for continued heavy production of sticks. Dollar devaluation and tighter world supplies have worsened the situation.

Fish eaters may wish to explore this year's larger supply of fish fillets, canned tuna, or canned sardines.

The July 1 inventory of fish fillets was three times bigger than last year's, and the 1973 consumption figure should notch up. Increased supplies of canned tuna and canned sardines should also be ample to support modest consumption gains.

Total use of all canned fish products this year, however, is likely to be about the same as last year. Reason is the 1973 salmon pack proved to be extremely poor, and stocks have been greatly eroded. Expected gains in consumption of canned tuna and sardines will therefore be largely offset by losses in salmon.

[Based on material appearing in *National Food Situation*, NFS-145, provided by the Commerce Department.]

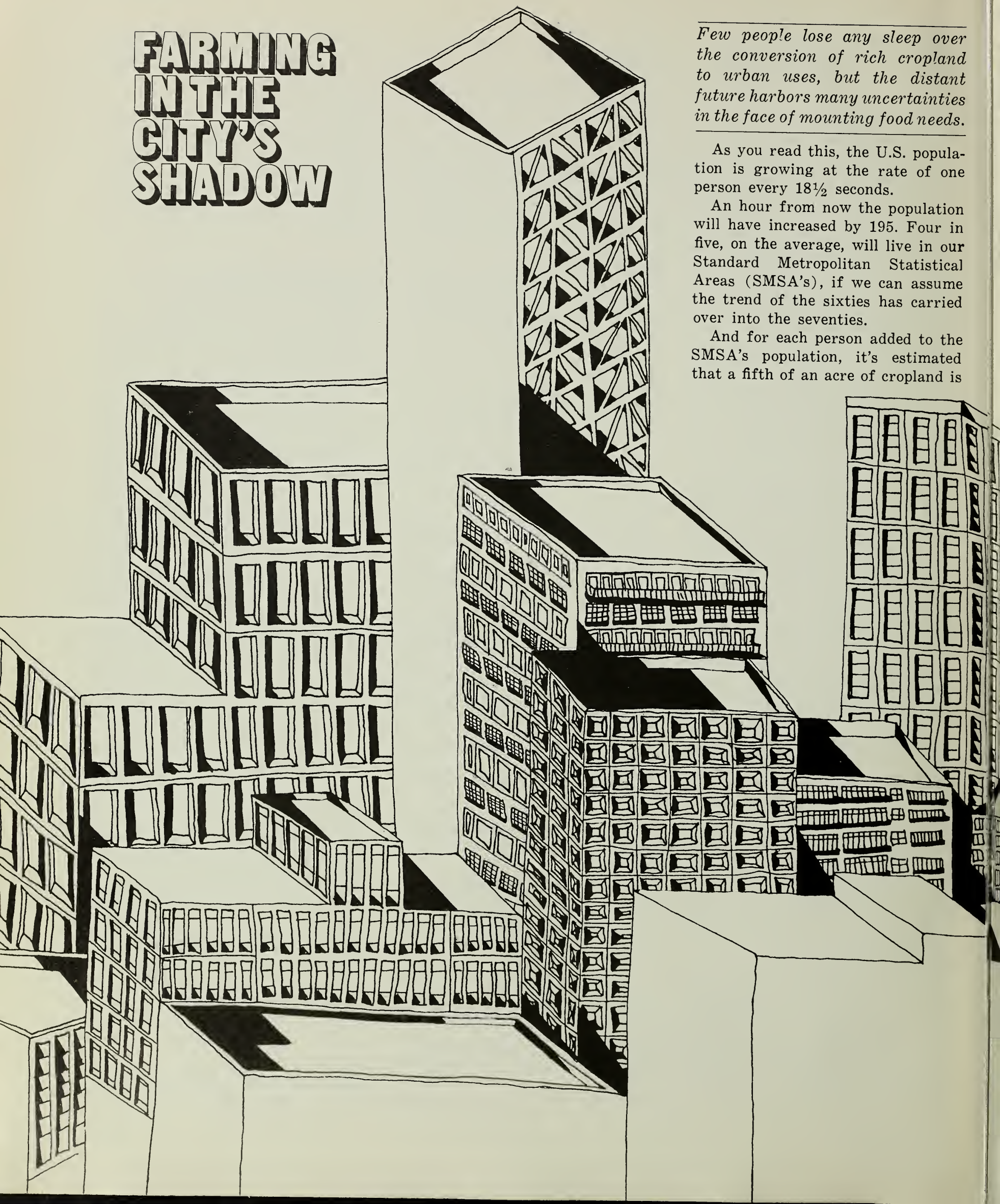
FARMING IN THE CITY'S SHADOW

Few people lose any sleep over the conversion of rich cropland to urban uses, but the distant future harbors many uncertainties in the face of mounting food needs.

As you read this, the U.S. population is growing at the rate of one person every 18½ seconds.

An hour from now the population will have increased by 195. Four in five, on the average, will live in our Standard Metropolitan Statistical Areas (SMSA's), if we can assume the trend of the sixties has carried over into the seventies.

And for each person added to the SMSA's population, it's estimated that a fifth of an acre of cropland is



lost to urbanization. This means that every hour some 40 acres of cropland disappear, perhaps never again to be put to the plow in our lifetime.

Farming in SMSA's. SMSA's comprise just 13 percent of the land area of the 48 contiguous States. Yet in 1969, latest year for which data are available, the SMSA's accounted for 17 percent of our farms, 14 percent of cropland harvested, and 21 percent of the value of all farm products sold.

As put by one ERS economist, we are literally farming in the city's shadow.

Right now, the situation doesn't pose a threat to our capacity to produce, but it is getting to be more worrisome as the demand for food accelerates (see box insert).

Last decade the acreage of farmland lost to the cities was small compared to the amount of new land brought into production, for less land is converted to urban uses than

farmers voluntarily shift out of crop production. Over three times the acreage urbanized each year is added to the cropland base through irrigation, drainage, and clearing.

Writing in a forthcoming publication, the ERS economist also notes that between 1950 and 1954, we used from 1.85 to 1.98 acres of cropland per capita to supply domestic needs. By 1965-71, this had decreased to 1.10-1.24 acres.

"As long as such gains in productivity continue," he says, "land for living, working, and recreation for an increasing population can be provided with minimum impact on agricultural production and consumption."

Meeting food needs. He figures that in the next 10 or 20 years, urban sprawl will not siphon off enough farmland to have much effect on total food production. Crop production can be expanded in many areas if there is sufficient incentive for farmers to make the necessary investments.

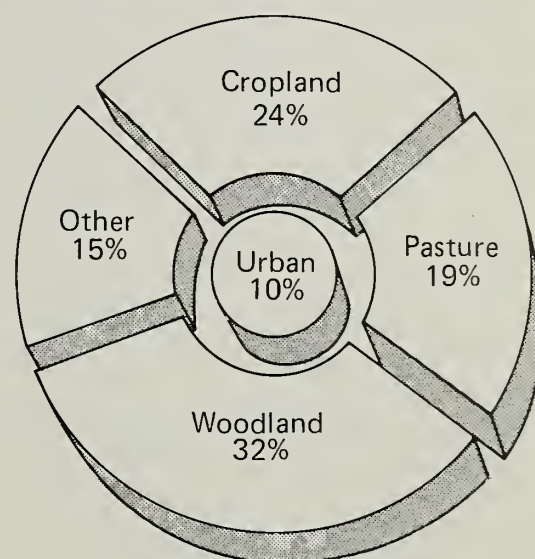
Also, average crop yields may still have room to grow, since top farmers are getting yields well above those on average or typical farms with comparable soils. And this doesn't take into account possible technological breakthroughs.

But the long-range view disturbs some people. They look at the recent leaps and bounds in food demand—particularly in world markets—and at the pressures building for a cleaner environment. One way to improve environmental quality, or at least not to worsen it, is to have new population centers locate in the open spaces of the Nation's heartlands. Agriculture would feel the crunch.

As a rule, the SMSA's have a little more than their fair share of the better agricultural land—that in Land Use Capability Classes I-III. Fifteen percent of this is within the SMSA's. This should be expected, inasmuch as many cities originated as trade centers in agricultural communities. Too, urban expansion requires land with even terrain.

Apart from specific localities, the most productive agricultural land is

Land Use in the SMSA's, 1970

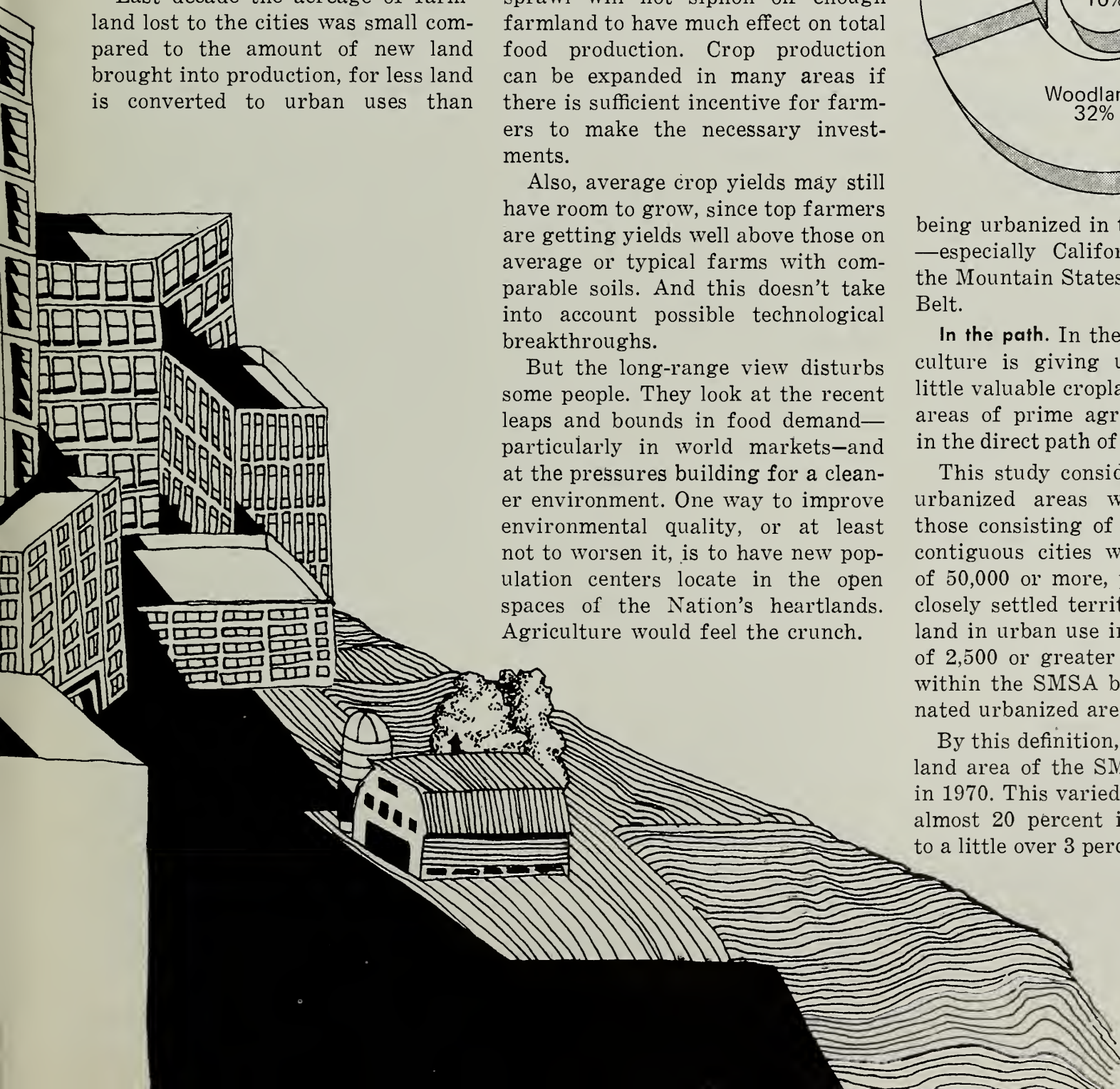


being urbanized in the Pacific States—especially California—in Florida, the Mountain States, and in the Corn Belt.

In the path. In the Northeast, agriculture is giving up comparatively little valuable cropland, except where areas of prime agricultural land lie in the direct path of urban expansion.

This study considered acreages in urbanized areas within SMSA's—those consisting of a central city or contiguous cities with a population of 50,000 or more, plus surrounding closely settled territory. In addition, land in urban use includes any place of 2,500 or greater population lying within the SMSA but outside designated urbanized areas.

By this definition, 10 percent of the land area of the SMSA's was urban in 1970. This varied regionally, from almost 20 percent in the Northeast to a little over 3 percent in the Moun-



tain States. This urban area within the SMSA's increased from 18 million acres in 1960 to 25 million in 1970.

Some .32 acre was added to the urban area for each person added to the population in the 242 mainland SMSA's as designated in 1970. Per capita rates were lowest in the Northeast and Pacific regions—.21 per capita—and were highest in the Northern Plains—.52 acre per capita.

Probably over half of this was cropland, although the share was greater in some regions than others. One study indicates that 76 percent of land urbanized in the West has been cropland. A study of the Northeast showed that 49 percent was previously cropland, and another in the Mississippi Delta indicated 54 percent was cropland.

[Based on manuscript by Robert C. Otte, Natural Resource Economics Division, entitled Farming in the City's Shadow.]

Second Thoughts

Though it's been said before that American agriculture is in no danger of running out of land, the land question has lately taken on new dimensions.

More and more, people are asking whether we have the resources to meet domestic and export demand for food in the future. Demand in the past year or two has been racing upward, prompting the Government to release millions of set-aside acres that previously had been withheld from crop production.

Last year, the United States used 296 million harvested acres to produce crops. In the past 10 years this has varied from 290 million to 306 million acres.

Of the 296 million used in 1972, the equivalent of about 85 million—or 23 million more than in 1971—went to produce products for export.

The 85 million represents over three times the cropland area of Texas, which grows a wide variety of items for the U.S. and export markets.

Demonstrator Plant Cuts Poultry Processing Costs By \$70,000 a Year

It's generally agreed it would be a lot cheaper for poultry processors to reduce their use of water and their waste load than pay higher waste treatment costs—but just how much could they save?

A case study at a plant in North Carolina that processed 70,000 birds daily showed \$70,000 in net annual benefits.

Water use was reduced by a third and waste load by two-thirds in this demonstration project, which was funded by the processing company and the Environmental Protection Agency. Grease in the plant effluent was cut more than in half, and feathers in the effluent were reduced.

Originally, the plant had used 850,000 gallons of water per day, averaging 12 gallons per bird; by the time the changes were made, this was down to 567,000 gallons per day, and 8 gallons per bird.

Water use was reduced primarily by greater efficiency. Water reuse, improved nozzles, proper water pressure, redesigned equipment, and increased worker awareness of water use problems all contributed to the 283,000-gallon-a-day savings.

In looking into the economics of the situation, the study took into account the costs for the process and equipment changes, including maintenance, taxes, interest, and operating expenses. Initial investments were depreciated over the useful life of the equipment.

Benefits from the changes included the reduced cost of water and sewer services and the value of the byproducts that were recovered.

The study found that, on the average, every dollar spent on annual costs yielded \$6.67 in benefits.

The study also said that a full-time water and waste manager would be essential if reductions were to be maintained since supervision and monitoring are critical in water and waste management. Such costs were not included in the budget. A man-

ager would also be concerned with keeping the processes and equipment up-to-date and developing new ways of reducing water use and waste, the study said.

[Based on paper "Water and Waste in Poultry Processing," by William M. Crosswhite, now with Natural Resource Economics Division, and Roy E. Carawan, North Carolina State University, presented at annual meeting of the Institute of Food Technologists, Miami, Fla., June 12, 1973.]

Study Team Findings Generate USDA Actions To Improve Crop Markets

USDA has initiated a series of actions to improve markets for five major commodities.

The actions—announced earlier this summer by Agriculture Secretary Butz—are in response to reports and recommendations of five USDA marketing teams. Formed by the Secretary in early 1972, the teams probed the marketing problems of apples, eggs, canning peaches, pork, and potatoes.

EGGS. The egg marketing team reported that instability in volume and prices, as well as declining consumer demand, were the industry's biggest problems.

Accordingly, ERS is examining marketing costs and returns, ways to improve egg outlook work, the impact of selling eggs as "loss-leaders" in supermarkets, and the effect of various tax accounting methods on egg production.

The Statistical Reporting Service (SRS) has begun to make separate estimates of eggs produced for table use and for hatching. This is now being done in three key egg States and may be expanded.

Acting on an egg team proposal, the Packers and Stockyards Administration last March issued a "prompt payment regulation" that directs handlers to pay producers without delay.

Also underway: studies to determine the most efficient way to dispose of poultry wastes, including recycling in livestock feeds, and efforts

to solve other environmental problems related to poultry production.

PORK. As a result of the pork team's findings, several agencies are assessing the merits of an electronic selling system in marketing hogs.

Under this system, hogs would remain on farms or in local markets while bidders compete for them in national or regional auctions via teletype or telephone. This would eliminate costly freight charges as well as stress and weight loss to hogs en route to market.

ERS and the Extension Service are seeking to upgrade short-, intermediate-, and long-run forecasting that will help producer decisionmaking and smooth out peaks and troughs in pork supplies and prices.

SRS is assisting in this effort by adding 4 more States to the 10 that are now included in its quarterly hog and pig reports.

Finding ways to lower production costs is another key project, and animal scientists are engaged in research to increase the number of pigs marketed per sow.

CANNING PEACHES. The peach marketing team stressed the need for improved and innovative peach products and better processing methods. Research in these areas has been expanded, as well as efforts to determine potential markets for surplus cling peaches.

USDA's Foreign Agricultural Service is developing an overseas promotion program for canned clingstones. In the United States, plans are underway to expand consumer and institutional markets.

APPLES. The Agricultural Research Service (ARS) has accelerated its research into new end uses for apples, better grading and sorting equipment, and improved shipping containers and harvesting methods.

ERS is exploring the market potential for apple juice and new apple products, and the Foreign Agricultural Service is dispatching a marketing team to investigate the potential for overseas sales.

In cooperation with the industry,

the Agricultural Marketing Service (AMS) is developing quality standards for frozen concentrated apple juice, and studying the possibilities of extending market news coverage to the apple industry. Also under consideration: revision of U.S. standards for apple grades to promote quality control.

POTATOES. In response to charges that existing potato varieties lack desired characteristics for specialized markets and long-term storage, ARS is experimenting with new varieties and new potato products. It's also seeking to curb pollution from potato processing.

Better ways to store, handle, and transport potatoes are also getting attention, and ERS is studying costs and returns to potato growers. Several agencies plan a joint examination of bargaining as a marketing tool for growers.

SRS has already enlarged its potato estimating system to include more data on grade and size of the potato crop when it moves into storage. Ways to measure quality change during storage are also being researched.

The Extension Service is working with State specialists in conducting demonstration programs, to improve marketing channels and to develop farm financial management programs.

[Based on a fact sheet entitled USDA Actions to Improve Markets for Five Crops.]

Aqua Ammonia Shows Potential for Savings In Farm Corn Storage

The use of aqua ammonia as a preservative in the on-farm storing of corn with a high moisture content has the potential for considerable savings over conventional preserving methods, an ERS study indicates.

Cost would be about a third that of drying corn and one-fourth to one-fifth that of the cost of organic chemical treatment.

Annual savings could run from \$150 million to \$175 million, and

farmers could save 5¢ a bushel on preservation measures.

However, the use of aqua ammonia hinges on whether it's technically effective and feasible. Among the unanswered questions is what happens chemically to corn when it's ammoniated.

Aside from cost, other possible advantages in the use of aqua ammonia in storing high-moisture corn are that grain storage would require less care and movement; that the corn would have a higher feed value due to ammonia's addition of nonprotein nitrogen; and that there would be potential savings in the use of a critically short energy source—gas for drying.

The study estimated that a plant with a production capacity of 4,000 tons of aqua ammonia per season would cost about \$38,000. If the plant produced 500 tons of aqua ammonia in a season, overhead would run about 32 percent of total cost per ton, and this would decrease to about 6 percent at the maximum capacity of 4,000 tons per season. Total supply cost—including overhead, plant operation, a built-in profit factor in addition to overhead, and farm delivery—would run about \$30 a ton at the 500-ton volume and \$22 a ton at the 4,000-ton volume.

In Illinois, in the midst of the Corn Belt, some 80 to 90 percent of the counties store enough corn in on-farm facilities to require 500 tons or more of aqua ammonia a season, and 60 to 75 percent store enough to require 1,000 tons or more.

In addition, aqua ammonia's use as a grain preservative could also be supplemented to some extent by its use as a fertilizer. Although anhydrous is replacing aqua ammonia in fertilizer use, some farmers still prefer aqua ammonia, even at a higher price per unit of nitrogen.

[Based on manuscript by Clarence A. Moore, National Economic Analysis Division, and E. B. Lancaster and R. J. Bothast, Agricultural Research Service, entitled Aqua Ammonia's Economic Potential as a Preservative for High-Moisture Corn.]

GETTING A JOB IN A DELTA TOWN



Citizens of Madison, Ark., tell their experiences of trying to land a nonfarm job when there are so many barriers to hurdle.

The young black man from a small Southern town had just graduated and gotten his first job—20 miles away at a factory.

Then he had to turn it down.

He didn't have a car . . . he couldn't get a ride. When he tried to buy an old car, neither the bank nor the auto dealer would finance it. And he

couldn't afford a newer car that the bank would finance.

How many more situations like this? Many, a University of Arkansas-USDA study indicates.

The study was of a small town—Madison, Arkansas, in the Mississippi Delta, where manufacturing has fast replaced agriculture as the main employment.

For the town's residents—mostly black, mostly poor, and mostly employed in agriculture at the start of the sixties—the past decade has

meant changing occupations. And the residents have encountered a number of difficulties.

Stumbling blocks. In interviews with just about every household in town, the researchers found five common barriers to employment.

At the top of the list was lack of available transportation. Other barriers looked into were the quality of work environment, including job discrimination; health; education; and geographic mobility.

More than half the households in

the town of 1,000 residents had no private transportation. Of those households at the poverty level—and 3 out of 4 were in 1970—2 out of 3 had no car, compared with about 1 out of 8 for those not in poverty.

For a typical black family in a town such as Madison, transportation is a big stumbling block to getting a job.

The average family lived 5 to 25 miles away from nonfarm jobs, had an annual income of \$2,600, and an average family size of seven members. A car—with increasing insurance costs and expensive pollution abatement devices in the offing—is beyond its means.

To make transportation more readily available, the study mentioned such possibilities as small buses financed partly by cooperating industrial firms; guaranteed loans to people who have proof of a job and can show need for improved transportation; and assistance from such agencies as Employment Security in helping low-income rural workers obtain automobile insurance at low rates.

Health hindrances. Of the other barriers to employment that were studied, poor health, too, proved to be a major concern. One out of 10 of those interviewed had at some time been refused employment because of his physical condition, and the instances were slightly higher among those in poverty.

More than 1 in 4 of those interviewed under 35 years of age reported health problems, and 3 out of 5 over 35 years of age. Of those with health problems, 3 out of 4 had sought help from a doctor, while 16 percent said they had used only home remedies.

As to the effect of the work environment on employment, the most common complaints were not of job discrimination, but of poor pay, unpleasant physical working conditions, and of work they didn't like.

Short on schooling. Education also proved a stumbling block. More than 1 in 4 of Madison's household heads at the poverty level were functional illiterates, with fewer than 5 years of formal education reported.

The median level of education for heads of households in Madison was about 7½ years, below both the State median for whites (11) and for blacks (8).

In the last category studied, geographic mobility, researchers found a considerable variation in the willingness of those interviewed to drive long distances to a job or to move to find work.

Overall, more than 55 percent of those interviewed said they were willing to drive 25 miles one way to work providing the work was satisfactory. Nearly 40 percent said they would move at least 50 miles to get work.

Of those at the poverty level, 40 percent were willing to drive 25 miles to work, and fewer than 20 percent were willing to move 50 miles or more to get a job.

About 3 out of 4, overall, said they would accept job training, and of those in poverty, about half said they would accept such training.

Aside from help in the area of transportation, the study said that other programs during the 1970's that might improve the employability of rural people in the Delta include providing basic educational and technical skills; income allowances; occupational counseling; and occupational diversity.

Farm to factory. During the sixties, Madison, as well as the county in which it lies, experienced a switch from agriculture-dominated employment to manufacturing.

Total employment remained the same during this time, but the number of employees in manufacturing more than doubled, and the number in agriculture dropped by two-thirds.

The racial composition of the area also changed, with the county's black population going down by nearly 25 percent, and the total county population by 7 percent.

Because blacks represented such a large proportion of the labor force at the start of the sixties, and because of the large drop in agricultural labor, blacks especially encountered

a need to switch occupations during this time.

Mostly, they moved out of the county or got jobs in one of a half-dozen manufacturing firms that located in the county in the sixties. These firms employed more than 1 out of 4 of the county's labor force.

[Based on an article by Mary Jo Grinstead and Martin Redfern, University of Arkansas, and Bernal L. Green, Rural Development Service, entitled "Barriers to Employment of Black Americans in a Delta Town," in a paper delivered to Southern Agricultural Economics Association Meeting, Atlanta, Ga., Feb. 4-7, 1973.]

Black-White Income Gap Widens in Rural South

The 1960's saw a further widening in the spread between incomes of black and white families living in the rural South.

According to figures from the Census of Population, adjusted to 1970 dollars to account for inflation, the median or midpoint income of white farm families in 1959 was \$3,770 and \$1,600 for blacks—a difference of \$2,170. By 1969 the medians had risen to \$6,580 for whites and \$3,450 for blacks—a difference of \$3,130.

The gulf also widened for rural nonfarm families, from \$3,100 in 1959 to \$3,690 in 1969.

In both the farm and nonfarm situations, the growth rate in median income of black families exceeded that for whites during 1959-69 but the increase was not sufficient to close the income gap.

For example, black farm families showed a gain in median incomes of 8.1 percent a year, 2.6 percentage points more than the increase for whites. However, to maintain the \$2,170 spread of 1959, the median for blacks would have had to have grown by 10 percent annually. The actual growth rate was 1.9 percentage points less than what was needed to maintain the income gap. The difference in incomes became greater even though the income of black farm families as a percent of white farm

families climbed from 42 percent in 1959 to 52 percent in 1969.

Occupationally, the proportion of rural black males holding farm related jobs decreased over the decade, whereas the proportion in operative and craftsmen type jobs increased.

Whites also left farm occupations. However, they tended to move into

more higher-paying professional or craftsmen type jobs than did the blacks.

An ERS report on the Census Population data concluded that it may take as many as 25 years before incomes of rural Southern blacks catch up with those of whites. This assumes the relative growth rates of

the 1960's continue into the 1980's. To achieve income parity in less time, future growth rates must be even higher for blacks relative to whites.

[Based on manuscript by Thomas A. Carlin, National Economic Analysis Division, entitled *Income and Occupations of Southern Rural Blacks: Changes During the 1960's.*]

FARM REAL ESTATE VALUE CLIMBS SHARPLY

The average value per acre of farm real estate has made its sharpest advance in more than 20 years, ERS reports.

For the year ending March 1, the value per acre rose 13 percent, going up \$28 to a new high of \$247 per acre.

Behind this overall uptrend are such factors as rising commodity prices, readily available credit, strong nonfarm demand, and pressure from investors seeking to hedge against continuing inflation.

In the Western States, rising demand for beef and extended beef cow operations accounted for most of the 64-percent increase in grazing land values that has occurred since March 1967.

The rate of voluntary sales throughout the country during the year rose from 34 to 41 per 1,000 farms, explaining most of the increase for the rate of all transfers—up from 48 per 1,000 farms to 56 per 1,000. Total transfers—at 145,700—were the highest since 1964.

The Corn Belt led all regions in average value of farmland sold—\$556 per acre—and was followed closely by the Northeast region at \$546 per acre. The Mountain region was lowest at \$100 per acre.

Farm real estate reporters indicated in ERS's survey that about 83 percent of all transfers would probably remain in agriculture at least 5 years. The remainder—about 1 in 6 transfers—were expected to shift to nonfarm use within a 5-year period. Of these, nearly half are expected to convert to rural residences, and a

fourth to convert to subdivisions.

The price paid per acre for farmland expected to remain in farm use for the next 5 years averaged \$267.

But for land expected to go out of farm use within the next 5 years, prices ranged from \$210 for mineral use to \$889 per acre for commercial or industrial use. In fact, in all cases except for minerals, the land was worth more for nonfarm uses.

Data indicate that nonagricultural influences are minimal on Corn Belt land expected to remain in agriculture for 5 years. This is shown by the close relationship between the value of land in agricultural use—\$554—and that in all uses—\$556—and by the small percentage of sales, acres, and value of farmland expected to be converted to nonfarm uses in this region over the next 5 years. In

contrast, the Northeast region showed a high expected rate of transfer to nonfarm uses—32 percent.

Nationwide, buyers of large acreages paid considerably less per acre than buyers of small tracts.

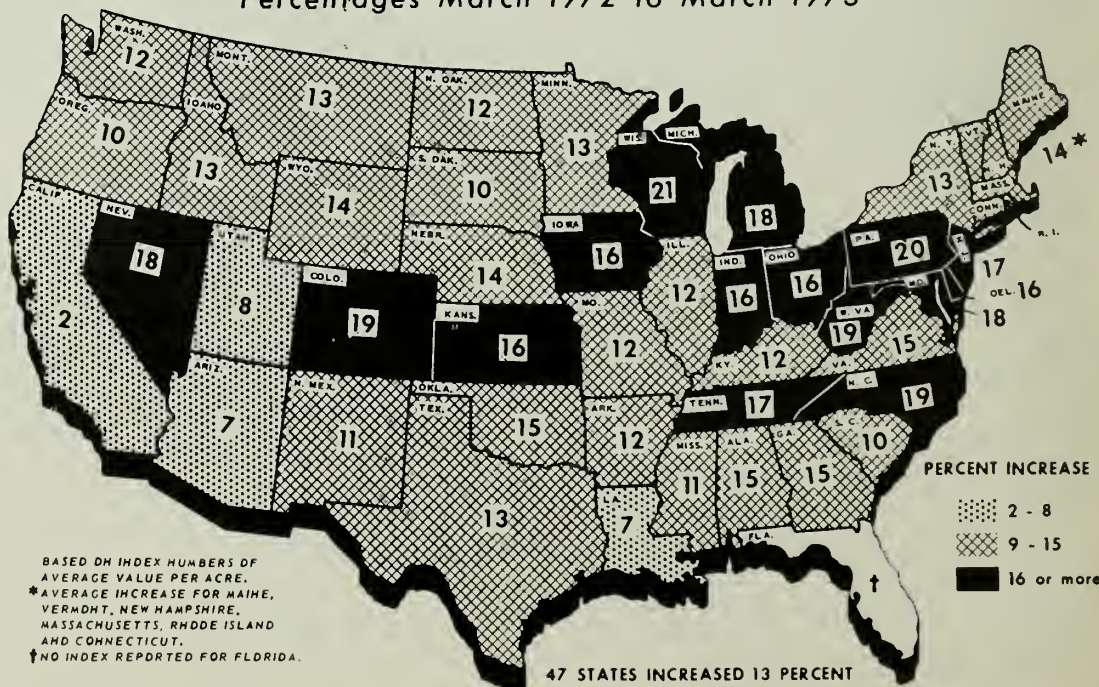
Individuals continued to be the biggest buyers and sellers of farm real estate. They accounted for 86 percent of the purchases, 71 percent of the acreage, and 73 percent of the land value. They accounted for 87 percent of the sales, 82 percent of the acreage sold, and 80 percent of the value—about the same as last year.

Nationally, large corporations bought and sold only about 1 percent of the farmland transferred.

[Based on information by Robert D. Reinsel, National Economic Analysis Division, in *Farm Real Estate Market Developments*, CD-78, July 1973.]

CHANGE IN AVERAGE VALUE OF FARM REAL ESTATE PER ACRE

Percentages March 1972 to March 1973



Subdivisions Sweep Up Biggest Share of Land Sold Out of Farms

The subdivision continues to be the biggest user of land shifting out of agriculture.

It's followed by development for recreation and for rural residences.

Those are the indications from ERS's latest survey of farm real estate that's being immediately transferred out of agriculture.

Reporters were asked to furnish information in their area on the five most recent sales of farm real estate that went primarily for nonagricultural use.

Based on the 2,400 sales on which it received information as of March 1, ERS found—

The average size of farmland tract purchased for nonfarm use was 159 acres—down from 218 acres reported in the March 1972 survey.

The price per acre had increased sharply—from \$354 to \$671 per acre. This probably reflects a shift in kinds of tracts sold rather than trends for a uniform quality of land.

Subdivisions accounted for 43 percent of the acreage transferred to nonfarm use, up from 38 percent a year earlier.

Commercial or industrial use, which accounted for only 8 percent of the transfers and 9 percent of the acreage, accounted for 23 percent of the value of land purchased.

Rural residences accounted for more than 1 out of 3 sales, down from a year earlier, but still ahead of the 1 out of 4 sales that went for subdivisions.

Regionally, subdivision use accounted for nearly 60 percent of the acreage in the Mountain region that was transferred out of agriculture. Reports indicate, however, that most of the acreage subdivided in this region was grazing or range land to be sold as ranches, ranchettes, or country estates.

[Based on information by Robert D. Reinsel, National Economic Analysis Division, in *Farm Real Estate Market Developments*, CD-78, July 1973.]



Men and Milestones

WASHINGTON, D.C., May 14, 1794—The U.S. Government awards Eli Whitney a patent on the cotton gin.

Thanks to Whitney's invention, U.S. cotton production skyrocketed by more than 4,500 percent between 1792 and 1795, from 138 thousand pounds to 6.3 million.

The gin made cotton king in the South, molded the region's labor system, and fed the mills of Europe.

Yet despite its enormous importance to the U.S. and the world, it brought little wealth to the man who invented it.

The need for the gin was so great, its construction so easy, and its success so remarkable that patent infringements were inevitable and widespread.

Only 4 years after he received his patent, Whitney turned his attention to revolutionizing another mechanical process, one that proved much more profitable for him than the gin. Using interchangeable parts, he created a way to mass-produce firearms, and on

that foundation he built a successful business that supported him in his native New England until his death in 1825.

This unusual man was born in Westboro, Mass., in 1765. Whitney showed a mechanical bent by the time he was 10. Later as a student at Yale he partially supported himself by repairing laboratory and other equipment.

Upon graduating in 1792, he traveled south to study law and work as a tutor. Early the next winter on a Georgia plantation he set about finding a way to separate long fibered cotton from its seed. Within 10 days, he had devised the principle behind the cotton gin.

It had the genius of simplicity. Metal spikes rotated between metal fingers, removing the cotton from the seed; then brushes took the lint from the spikes.

Yet simple as it was, the cotton gin helped shape the destiny of the South.

[Based on special material by the Agricultural History Group.]



These days, it's a worldwide beef economy: What happens in one country echoes on the world stage. An economist with ERS here gives his views about the complicated factors affecting global supplies.

The lean beef situation of recent times is not confined to the U.S.

In the world marketplace as well, the supply of beef traded has not been sufficient to keep up with the demand, and prices have shot to record highs.

The encouraging word from live-

BEEF FOR BILLIONS

stock authorities is that certain developments in the leading beef nations portend a return to more normal conditions.

In the U.S.—the No. 1 beef producer, accounting for a fourth of the world's beef and a fifth of all meat including poultry—the number of cattle and calves on farms is rising again this year. USDA has estimated there were a record 122 million cattle and calves on U.S. farms on January 1, 1973—4 million more than a year earlier. Barring further disruptions in marketings, and assuming adequate feed supplies, the industry's output of fed beef should get back on track by early 1974.

Australia, first in beef exports, has

likewise experienced a buildup in herd size. This beef is already moving to world markets in growing quantities.

Argentina, close behind Australia as a beef shipper, is gearing up to export more. To some extent, prospects hinge on what Argentina's new government will do to promote cattle production.

Europe ranks as the largest beef importer. Its cattle numbers are also on the upswing, so pressure on world beef prices and supplies can be expected to let up a little.

Behind the price rise. Those who follow the beef scene offer various explanations as to what ignited the explosion in world beef prices.

One ERS economist believes the situation in Europe played a starring role, although there were a number of supporting players too.

He points out that the ups and downs in international beef supplies and prices have, over time, come to coincide with Europe's cyclical pattern of cattle production.

The European Community (EC) occupies a fairly small piece of the world's land area, but the people of the EC account for 15 percent of global beef consumption and 17 percent of world meat consumption including poultry. The EC produces about 85 percent of its needs and the rest must be brought in from the outside.

Strain on supply. When the EC's domestic beef output slips even a few percentage points—as it has in recent years—world supplies are severely taxed. And when local production, without actually falling, just fails to keep up with growing local demand for beef, world supplies feel the strain. Either way, market prices rise.

The EC's cattle industry has been on the down (or no growth) part of production cycles on three occasions since World War II—once in the mid-fifties, again in the first half of the sixties, and most recently since 1970. These production extremes have a number of explanations.

Following World War II, Europe made an intensive effort to replenish

the depleted supply of livestock as swiftly as possible. Cattle herds expanded rapidly, and the calves of these cattle hit the market at the same time. Prices to producers weakened. This led to heavy slaughter and eventually to an overkill.

Then, cattle prices zoomed, providing the incentive for producers to once more expand their herds. In the 1950's and 1960's the process was repeated all over again—bunched cattle sales, depressed prices, overkill, and herd buildup.

Cyclical production has been further encouraged by feed shortages, as in the winter of 1963-64, and by Europe's hog cycles. The pattern for hogs weaves around that for cattle. Thus, pork and beef supplies sometimes offset, at times rise and fall together, or tend to reinforce the extremes in cattle prices and production.

Dairy dilemma. Another reason for the production fluctuations has to do with the type of cattle raised in Europe. Unlike the U.S. the EC's locally produced beef comes principally from dairy cattle.

It sometimes happens that Europe gets knee-deep in dairy products. To ease the surplus situation, measures are taken to get farmers to trim their herds, with the result that beef supplies first grow but eventually contract, and imports swell. The burdensome dairy surpluses of the late 1960's were brought under control in the early 1970's, but dairy herds as well as beef cattle are increasing again. Greater beef production should follow. And, of course, milk production is rising and surpluses are growing again.

Policy decisions made in the EC also have an effect on world meat prices. The EC operates a complex system of variable levies, or tariffs, on imports and it subsidizes exports. The object is to assure normal consumer supplies, secure local markets for local producers, and stabilize domestic markets. But since the EC's domestic production is very unstable, the EC system in effect exports that instability to the rest of the world.

The variable levy—a fluctuating

tariff collected by the EC—is the difference between domestic EC prices and world prices, which are typically lower. When the EC has meat shortages and temporarily waives this tariff to attract supplies, world prices can rise to the EC level. Reimposition of the levy causes world prices to recede. As to the export subsidies, they both raise domestic prices and lower world prices.

U.S. effect. The role of the United States in the world's beef economy presents an interesting case. We generally import less than a tenth of the beef we consume—including cattle-on-the-hoof from Canada and Mexico—and most of this goes into manufactured products like hamburgers.

Hard to determine is just how these imports affect our prices and cattle production patterns. Most economists would agree, though, that imports do influence domestic price movements to a degree, and that price and supply changes in this country echo on the world stage.

Thirty percent of the world's beef is eaten by Americans. Theoretically at least, consumers in the U.S. can be expected to bid for more beef on the international market if the price is right. This growing demand would cause world beef prices to inflate somewhat.

World reaction. When, however, both the U.S. and the EC are buying meat in world markets at the same time, world prices react quite strongly.

On the other side of the coin, relatively low beef prices in our country would encourage other countries to buy our cheaper meat, since we also export some beef products. Over time, U.S. prices would react by inching up.

However, there is at least one element that tends to keep the lid on U.S. beef imports (aside from import quotas which are currently not in effect). It is aftosa.

Also known as foot-and-mouth disease, aftosa produces drastic weight loss in cattle, and sometimes death. Aftosa is endemic in Europe, Asia, Africa, and in the Western Hemisphere south of Panama. The U.S. spent millions to help eradicate

the infirmity in Mexico in the 1950's.

Stiff standards. Aware of the damage aftosa could do to U.S. herds if it ever got loose in this country—and not only live cattle but uncooked beef can harbor the disease—the Government prohibits beef and cattle imports from aftosa areas of the world unless the meat is heat treated to 156 degrees F and held for a minimum of 2 hours. Thus cooked meat—canned or frozen—may be imported, although stiff standards apply to all meats entering the U.S.

Europe, in contrast, allows uncooked beef imports, subject to rigid inspection procedures as are the plants that provide it.

Europe gets most of its imported meat as chilled beef from Latin America—chiefly Argentina—supplemented by frozen beef from Oceania and Africa, whereas ours comes mostly frozen from aftosa-free Australia and New Zealand or live from Canada and Mexico. Some of the foreign beef served in the U.S. is cooked or roasted in Argentina and shipped frozen.

Beef elsewhere. Several countries besides those already named have had some impact—albeit slight—on the international beef situation in the past, or else they loom as possible factors in the future.

In South America, Brazil claims a larger cattle population than any other Latin country, including Argentina, but has large domestic requirements. Brazil has been in and out of the beef export business but it promises to become a more regular supplier in the years ahead. One hopeful sign is a new government program to speed the flow of animals from the interior to slaughterhouses and ultimately to the ports for export.

On the whole, South America takes care of its own beef needs, with deficits in some countries made up by excesses in others.

In the Far East, Indonesia is self-sufficient in beef if for no other reason than the fact that purchasing power is low and most people can't afford to buy much meat.

In Japan, however, demand for

beef is exceptionally buoyant. Consumption has followed rising income trends, the country having more than doubled its per capita beef use in the last 20 years. Japan now regulates beef imports, but an easing of restrictions could result in a tremendous surge in import demand that would be felt in the world market.

African drought. Africa's beef economy is self-contained, with the possible exception of South Africa which does some exporting to world markets and eastern Africa where hopeful developments in cattle ranching are occurring. The near-term outlook for greater beef production is made uncertain by a 6-year drought that struck the heart of the South Sahara cattle center. Pastures have dried up, and feed supplies are hard to come by.

In the Soviet Union, the government is determined to quicken the pace of livestock development. The

USSR in the past has not been an important beef trader; it has imported only to fill local shortfalls in border areas. Occasionally, it has exported some beef to Europe.

The People's Republic of China relies mainly on pork and poultry for meat. Foreign trade in beef products makes up an insignificant part of the overall meat picture.

Biggest cattle herd. India maintains the world's biggest cattle herd. Though most people don't think of India as a beef consuming country because of religious beliefs, the prohibition on slaughter of cattle applies mainly to female animals. Also, there are many Indians—particularly the lower castes—who are not under the injunction against beef eating. In any case, India's cattle industry does not figure in the foreign trade setting at this time.

[Based on special material from Donald W. Regier, Foreign Demand and Competition Division.]

Recent Publications

Growth Potential of Corn Production in Western Europe Through 1975 and 1980. William P. Roenigk, James E. Lopes, and Donald M. Phillips, Foreign Demand and Competition Division. FAER-88.

This study's main focus is on evaluation of the corn production potential in Western Europe to 1975 and 1980. Special attention is given to France, Italy, and Spain, the region's major corn producers. An evaluation is made of probable corn utilization in 1975 and 1980.

1973 Changes in Farm Production and Efficiency: A Summary Report: Prepared in National Economic Analysis Division. Stat. Bull. 233.

This annual publication presents the major statistical series on farm production, production inputs, and efficiency. It provides in one place the latest information for appraising changes in production, changes in farm inputs and practices, improvements in labor productivity, and

progress of farm mechanization.

Farm Real Estate Market Developments. Robert D. Reinsel and William D. Crowley, Jr., National Economic Analysis Division. CD-78.

Farm real estate values per acre rose 13 percent in the year ending March 1, 1973, pushing the national index of farmland values to 150 (1967=100)—up from 132 a year ago.

Single copies of the publications listed here are available free from The Farm Index, Economic Research Service, Rm. 1459-So., U.S. Department of Agriculture, Washington, D.C. 20250. However, publications indicated by () may be obtained only by writing to the experiment station or university. For addresses, see the July and December issues of The Farm Index.*

Economic Trends

Item	Unit or Base Period	1967	1972 Year	June	April	1973 May	June
Prices:							
Prices received by farmers	1967=100	—	126	125	157	163	172
Crops	1967=100	—	115	116	143	154	170
Livestock and products	1967=100	—	134	132	168	169	173
Prices paid, interest, taxes and wage rates	1967=100	—	127	126	140	143	146
Family living items	1967=100	—	124	124	134	136	138
Production items	1967=100	—	122	121	139	143	149
Ratio ¹	1967=100	—	100	99	112	114	118
Wholesale prices, all commodities	1967=100	—	119.1	118.8	130.7	133.5	136.7
Industrial commodities	1967=100	—	117.9	117.9	124.4	125.8	126.9
Farm products	1967=100	—	125.0	124.0	160.6	170.4	182.3
Processed foods and feeds	1967=100	—	120.8	119.6	139.8	145.0	151.8
Consumer price index, all items	1967=100	—	125.3	125.0	130.7	131.5	132.4
Food	1967=100	—	123.5	123.0	136.5	137.9	139.4
Farm Food Market Basket: ²							
Retail cost	1967=100	—	121.3	120.6	137.0	138.2	140.4
Farm value	1967=100	—	124.4	124.1	156.2	155.7	164.3
Farm-retail spread	1967=100	—	119.3	118.4	124.9	127.1	125.2
Farmers' share of retail cost	Percent	—	40	40	44	44	45
Farm Income: ³							
Volume of farm marketings	1967=100	—	112	94	75	83	92
Cash receipts from farm marketings	Million dollars	42,693	60,671	4,293	4,483	5,140	5,600
Crops	Million dollars	18,434	25,075	1,262	1,268	1,413	1,900
Livestock and products	Million dollars	24,259	35,596	3,031	3,215	3,727	3,700
Realized gross income ⁴	Billion dollars	49.0	68.9	68.1	—	—	82.5
Farm production expenses ⁴	Billion dollars	34.8	49.2	48.8	—	—	58.0
Realized net income ⁴	Billion dollars	14.2	19.7	19.3	—	—	24.5
Agricultural Trade:							
Agricultural exports	Million dollars	—	9,404	743	1,264	1,365	1,376
Agricultural imports	Million dollars	—	6,459	521	696	786	664
Land Values:							
Average value per acre	Dollars	⁶ 168	⁷ 219	—	—	—	⁸ 247
Total value of farm real estate	Billion dollars	⁶ 181.9	⁷ 230.5	—	—	—	⁸ 258.7
Gross National Product: ⁴							
Consumption	Billion dollars	793.9	1,155.2	1,142.4	—	—	1,271.0
Investment	Billion dollars	492.1	726.5	719.2	—	—	795.1
Government expenditures	Billion dollars	116.6	178.3	174.7	—	—	199.2
Net exports	Billion dollars	180.1	255.0	254.2	—	—	275.0
	Billion dollars	5.2	—4.6	—5.7	—	—	1.7
Income and Spending: ⁵							
Personal income, annual rate	Billion dollars	629.3	939.2	927.0	1,011.6	1,018.7	1,027.1
Total retail sales, monthly rate	Million dollars	26,151	37,365	36,822	41,185	41,569	41,253
Retail sales of food group, monthly rate	Million dollars	5,759	7,918	7,832	8,616	8,621	—
Employment and Wages: ⁵							
Total civilian employment	Millions	74.4	⁹ 81.7	⁹ 81.8	⁹ 83.9	⁹ 84.0	⁹ 84.7
Agricultural	Millions	3.8	⁹ 3.5	⁹ 3.3	⁹ 3.3	⁹ 3.3	⁹ 3.4
Rate of unemployment	Percent	3.8	5.6	5.5	5.0	5.0	4.8
Workweek in manufacturing	Hours	40.6	40.6	40.6	40.9	40.7	40.6
Hourly earnings in manufacturing, unadjusted	Dollars	2.83	3.81	3.79	4.01	4.02	4.04
Industrial Production: ⁵							
	1967 = 100	—	114	113	123	124	124
Manufacturers' Shipments and Inventories: ⁵							
Total shipments, monthly rate	Million dollars	46,449	62,466	61,295	70,468	71,284	71,545
Total inventories, book value end of month	Million dollars	84,655	107,719	104,260	110,577	111,625	113,039
Total new orders, monthly rate	Million dollars	46,763	63,514	63,817	73,325	74,535	74,786

¹ Ratio of index of prices received by farmers to index of prices paid, interest, taxes, and farm wage rates. ² Average annual quantities of farm food products purchased by urban wage-earner and clerical worker households (including those of single workers living alone) in 1959-61—estimated monthly. ³ Annual and quarterly data are on 50-State basis. ⁴ Annual rates seasonally adjusted second quarter. ⁵ Seasonally adjusted. ⁶ As of March 1, 1967. ⁷ As of March 1, 1972. ⁸ As of March 1, 1973. ⁹ Beginning January 1972 data not strictly comparable with prior data because of adjustment to 1970 Census data.

Sources: U.S. Dept. of Agriculture (Farm Income Situation, Marketing and Transportation Situation, Agricultural Prices, Foreign Agricultural Trade and Farm Real Estate Market Developments); U.S. Dept. of Commerce (Current Industrial Reports, Business News Reports, Monthly Retail Trade Report and Survey of Current Business); and U.S. Dept. of Labor (The Labor Force and Wholesale Price Index).

UNITED STATES GOVERNMENT PRINTING OFFICE
DIVISION OF PUBLIC DOCUMENTS, WASHINGTON, D.C. 20402
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